

PHOSPHORUS INDEX WORKSHEET – **EASTERN OREGON AND WASHINGTON** – May 14, 2001 (**Draft 5**)

Producer: _____ County: _____ Tract No. _____ Field No(s). _____ Date: _____ Planner: _____

Soil Map Unit(s) _____ Soil Test P _____ ppm Lab. Method _____ Sample Depth _____

Crop Rotation: _____ Nutrient Application Method(s) _____

| | | PHOSPHORUS LOSS RATING | | | | | Weighted Rating Value | |
|--|---|--|---|--|---|---|-----------------------|---------|
| TRANSPORT FACTORS | Factor Weight | None (0) | Low (1) | Medium (2) | High (4) | Very High (8) | Current | Planned |
| Soil Erosion – tons/ac/yr (RUSLE and/or WEQ) | 1.50 | < 1 (0) | 1 – 3 (1.5) | 4 – 6 (3.0) | 7 – 15 (6.0) | > 15 (12.0) | _____ | _____ |
| Soil Erosion from Sprinkler Irrigation | 0.25 | No sprinkler irrigation (0) | Application rate < infiltration rate OR No visible runoff at field borders (0.25) | Application rate = infiltration rate OR Little to no visible runoff at field borders (0.5) | Application rate > infiltration rate OR Visible runoff at field borders (2.0) | Application rate > infiltration rate OR Excessive runoff visible at field borders. Rills and gullies present. (4.0) | _____ | _____ |
| Soil Erosion from Surface Irrigation | 1.00 | No surface irrigation or tail water return flow in place (0) | QS < 6 for very erodible soils OR QS < 10 for all other soils (1.0) | QS ≥ 10 for erosion resistant soils (2.0) | QS ≥ 10 for erodible soils (4.0) | QS ≥ 6 for very erodible soils (8.0) | _____ | _____ |
| Runoff Class | 1.00 – nonirrigated 0.50 - irrigated | Negligible (0) | Very low or low (0.5 IRR, 1.0 NIRR) | Medium (1.0 IRR, 2.0 NIRR) | High (2.0 IRR, 4.0 NIRR) | Very High (4.0 IRR, 8.0 NIRR) | _____ | _____ |
| Distance to perennial surface waters / buffer widths | 0.50 | > 500 feet OR buffer > 30 ft. wide (or meets NRCS standards) next to surface waters (0) | 300 – 500 feet OR buffer 20 - 30 ft. wide next to surface waters (0.5) | 200 – 299 feet OR buffer 10 -19 ft. wide next to surface waters (1.0) | 100 – 199 feet AND buffer < 10 ft. wide next to surface waters (2.0) | < 100 feet AND No buffer next to surface waters OR Return flow from surface irrigation occurs with no buffer (4.0) | _____ | _____ |
| Subsurface Drainage | 0.50 | No tile drains (0) | Tile drains present Soil Test P (Olsen) < 40 ppm (0.5) | Tile drains present Soil Test P (Olsen) 40 - 120 ppm (1.0) | Tile drains present Soil Test P (Olsen) 121 - 170 ppm (2.0) | Tile drains present Soil Test P (Olsen) > 170 ppm (4.0) | _____ | _____ |

| | | PHOSPHORUS LOSS RATING | | | | | Weighted Rating Value | |
|--|---------------|--|--|---|--|---|-----------------------|---------|
| SOURCE FACTORS | Factor Weight | None (0) | Low (1) | Medium (2) | High (4) | Very High (8) | Current | Planned |
| Soil Test P – 0-12" ppm (Olsen NaHCO ₃) | 1.00 | $(\text{Soil Test P} - 20) / 10 \quad \left(\frac{\text{_____} - 20}{\text{Soil Test P}} \right) / 10 = \text{_____}$ Assign 0 points if Soil Test P < 20 ppm | | | | | _____ | _____ |
| Commercial P Fertilizer Application Rate | 0.75 | $(\text{lbs/ac P}_2\text{O}_5 / 50) \times 0.75 \quad \left(\frac{\text{_____}}{\text{lbs/ac P}_2\text{O}_5} / 50 \right) \times 0.75 = \text{_____}$ | | | | | _____ | _____ |
| Commercial P Fertilizer Application Method | 0.50 | None Applied (0) | Placed with planter OR Injected deeper than 2 inches OR Incorporated by plowing (0.5) | Incorporated deeper than 3 inches by disking, chiseling, etc. (1.0) | Incorporated less than 3 inches deep by harrowing, etc. (2.0) | Surface applied – not incorporated prior to irrigation or winter precipitation (4.0) | _____ | _____ |
| Organic P Source Application Rate | 1.00 | $\text{lbs/ac P}_2\text{O}_5 / 50 \quad \frac{\text{_____}}{\text{lbs/ac P}_2\text{O}_5} / 50 = \text{_____}$ | | | | | _____ | _____ |
| Organic P Source Application Method | 1.00 | None Applied (0) | Injected deeper than 2 inches OR Incorporated immediately (1.0) | Incorporated deeper than 3 inches by disking, chiseling, etc. within 5 days of application (2.0) | Incorporated less than 3 inches deep by harrowing, etc. within 21 days of application (4.0) | Surface applied – not incorporated prior to irrigation or winter precipitation (8.0) | _____ | _____ |

| Total Rating Value TFS x SFS | Site Vulnerability Class |
|---------------------------------|--------------------------|
| < 30 | Low |
| 30 – 130 | Medium |
| 131 – 500 | High |
| > 500 | Very High |

| | Current | Planned |
|----------------------------------|---------|---------|
| Transport Factors Subtotal (TFS) | | |
| Source Factors Subtotal (SFS) | | |
| Total Rating Value (TFS x SFS) | | |
| Site Vulnerability Class | | |

PHOSPHORUS INDEX WORKSHEET – WESTERN OREGON AND WASHINGTON (Draft 7)

May 14, 2001

Producer: _____ County: _____ Tract No. _____ Field No(s). _____ Date: _____

Soil Map Unit(s) _____ Soil Test P _____ ppm Lab. Method _____ Sample Depth _____

Crop Rotation: _____ Nutrient Application Method(s) _____

| | | PHOSPHORUS LOSS RATING | | | | | Weighted Rating Value | |
|--|---------------|---|---|--|---|---|-----------------------|---------|
| TRANSPORT FACTORS | Factor Weight | None (0) | Low (1) | Medium (2) | High (4) | Very High (8) | Current | Planned |
| Soil Erosion – tons/ac/yr (RUSLE) | 1.50 | < 1 (0) | 1 – 3 (1.5) | 4 – 6 (3.0) | 7 – 15 (6.0) | > 15 (12.0) | _____ | _____ |
| Soil Erosion from Sprinkler Irrigation | 0.75 | No sprinkler irrigation (0) | Application rate < infiltration rate OR No visible runoff at field borders (0.75) | Application rate = infiltration rate OR Little to no visible runoff at field borders (1.5) | Application rate > infiltration rate OR Visible runoff at field borders (3.0) | Application rate > infiltration rate OR Excessive runoff visible at field borders. Rills and gullies present. (6.0) | _____ | _____ |
| Runoff Class | 1.00 | Negligible (0) | Very low or low (1.0) | Medium (2.0) | High (4.0) | Very High (8.0) | _____ | _____ |
| Flooding Frequency Class | 0.75 | None or very rare (0) | Rare (0.75) | Occasional (1.5) | Frequent (3.0) | Very Frequent (6.0) | _____ | _____ |
| Distance to perennial surface waters / buffer widths | 0.75 | > 500 feet OR buffer > 30 ft. wide (or meets NRCS standards) next to surface waters (0) | 300 – 500 feet OR buffer 20 - 30 ft. wide next to surface waters (0.75) | 200 – 299 feet OR buffer 10 - 19 ft. wide next to surface waters (1.5) | 100 – 199 feet AND buffer < 10 ft. wide next to surface waters (3.0) | < 100 feet AND No buffer next to surface waters (6.0) | _____ | _____ |
| Subsurface Drainage | 0.50 | No Tile Drains (0) | Tile drains present Soil Test P (Bray P1) < 60 ppm (0.5) | Tile drains present Soil Test P (Bray P1) 61 - 140 ppm (1.0) | Tile drains present Soil Test P (Bray P1) 141- 190 ppm (2.0) | Tile drains present Soil Test P (Bray P1) > 190 ppm (4.0) | _____ | _____ |

| | | PHOSPHORUS LOSS RATING | | | | | Weighted Rating Value | |
|--|---------------|---|---|--|---|--|-----------------------|---------|
| SOURCE FACTORS | Factor Weight | None (0) | Low (1) | Medium (2) | High (4) | Very High (8) | Current | Planned |
| Soil Test P – ppm (Bray P1) | 1.00 | $(\text{Soil Test P} - 40) / 10$ $(\text{_____} - 40) / 10 = \text{_____}$ Assign 0 points if Soil Test P < 40 ppm <div style="text-align: center;">Soil Test P</div> | | | | | _____ | _____ |
| Commercial P Fertilizer Application Rate | 0.75 | $(\text{lbs/ac P}_2\text{O}_5 / 50) \times 0.75$ $(\text{_____} / 50) \times 0.75 = \text{_____}$ <div style="text-align: center;">lbs/ac P₂O₅</div> | | | | | _____ | _____ |
| Commercial P Fertilizer Application Method | 0.50 | None Applied (0) | Injected / banded deeper than 2 inches OR Incorporated within 5 days of application from March through September (0.5) | Incorporated within 5 days of application from October through February OR Surface applied March through August (1.0) | Incorporated more than 5 days after application OR Surface applied September through October (2.0) | Surface applied November through February (4.0) | _____ | _____ |
| Organic P Source Application Rate | 1.00 | $\text{lbs/ac P}_2\text{O}_5 / 50$ $\text{_____} / 50 = \text{_____}$ <div style="text-align: center;">lbs/ac P₂O₅</div> | | | | | _____ | _____ |
| Organic P Source Application Method | 1.00 | None Applied (0) | Injected deeper than 2 inches OR Incorporated within 5 days of application from March through September (1.0) | Incorporated within 5 days of application from October through February OR Surface applied March through August (2.0) | Incorporated more than 5 days after application OR Surface applied September through October (4.0) | Surface applied November through February (8.0) | _____ | _____ |

| | | Current | Planned |
|--|----------------------------------|---------|---------|
| Total Rating Value TFS + SFS < 13.0 Low 13.0 – 25.0 Medium 25.1 – 50.0 High > 50.0 Very High | Transport Factors Subtotal (TFS) | | |
| | Source Factors Subtotal (SFS) | | |
| | Total Rating Value (TFS + SFS) | | |
| | Site Vulnerability Class | | |

